

**TAG: Vehicles in Motion**  
**Big Challenge Introduction**

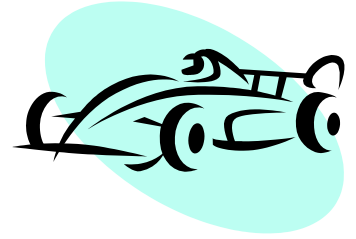
Name \_\_\_\_\_

Hour \_\_\_\_\_ Date \_\_\_\_\_

**What's the Big Challenge?**

Read pp. 3 & 4.

What will you be doing in this unit, as a design engineer?



Read the paragraphs under “**Think About the Big Challenge**” on p. 5.

What science knowledge will you need to gain in order to accomplish the big challenge?



**Get Started**

Answer the following questions. (Leave yourself extra space because you'll be adding to your answers later!)

1. What is motion? What causes motion?
2. What causes cars, bikes, skateboards, and wheelchairs to move if they are at rest?
3. What causes an object to change its motion—to turn, speed up, or slow down?
4. What causes an object to stop?
5. How can motion be measured?



Stop to **share your ideas** with the class.

### Messing About With Toy Cars

Read p. 7.

What is the purpose of this “Messing About” activity?

Read the **Procedure** on pp. 8 & 9. Then do the “Messing About” activity. Complete your “Messing About” observations sheet. (1 for each toy car)



Stop to **share your ideas** with the class.

What *categories* did your class *decide* to use to group the cars? What are the characteristics of the cars in each category?



### Reflect

Go back to the “Getting Started” and revise your answers to the questions.

### Identify Criteria and Constraints

Criteria	Constraints

### Create a Project Board

Start your project board with your class (first two columns).